REMARKS

The Office Action dated July 25, 2007 has been received and carefully noted. The above amendments to the claims, and the following remarks, are submitted as a full and complete response thereto.

Claims 1-18 and 22 have been amended to more particularly point out and distinctly claim the subject matter which is the invention. No new matter has been added and no new issues are raised which require further search. Claims 1-25 are submitted for reconsideration.

Claims 1-25 were rejected under 34 U.S.C. 103(a) as being unpatentable over British Patent Application No. GB 2327175 to Knight (hereinafter Knight) in view of U.S. Patent Publication No. 2005/0028194 to Elenbaas (hereinafter Elenbaas). According to the Office Action, Knight teaches all of the elements of claims 1-25 except for teaching that the users of the telecommunication system are classified on the basis of the filtered user-specific information into various classes indicative of a user's behaviour pattern during the use the telecommunication system. Therefore, the Office Action combined Knight and Elenbaas in an effort to yield all of the elements of claims 1-25. The rejection is traversed as being based on references that neither teach nor suggest the novel combination of features clearly recited in claims 1-25.

Claim 1, upon which claims 2-12 depend, recites a method for determining the behavior patterns of users of a telecommunication system on the basis of information collected

- 8 -

from the system. The method includes defining at least one variable or a combination of variable of the telecommunication system. The method also includes filtering user-specific information corresponding to the defined at least one variable or a combination of variables from the information collected from the telecommunication system. The method further includes classifying the users of the telecommunication system on the basis of the filtered user-specific information into various classes indicative of a user's behavior patterns during use of the telecommunication system.

Claim 13, upon which claims 14-18 depend, recites a system for determining the users' patterns of behavior in a telecommunication system. The system includes means for defining at least one variable or a combination of variables of the telecommunication system. The system also includes filtering means for filtering the user-specific information corresponding to at least one variable or a combination of variables from the information received from the telecommunication system. The system further includes classifying means for classifying the users of the telecommunication system on the basis of the filtered user-specific information into various classes indicative of a user's behavior patterns during use of the telecommunication system.

Claim 19, upon which claims 20-24 depend, recites a telecommunication system for determining the behavior patterns of users of the telecommunication system on the basis of information collected from the system. The system includes at least one base station, at least one mobile services switching center (MSC) for establishing a connection to a mobile station and generating connection information and at least one network management system (NMS) for

monitoring and managing operation of the telecommunication system. The system also includes a customer register for receiving the connection information from the at least one MSC, a statistical unit for receiving statistical information from the at least one NMS and a filter configured to filter the user-specific information corresponding to at least one variable or a combination of variables from the information received from the telecommunication system. The at least one variable or a combination of variables is defined in the telecommunication system. The system further includes a classifier configured to classify the users of the telecommunication system on the basis of the filtered user-specific information into various classes indicative of a user's behavior patterns during use of the telecommunication system.

Claim 25 recites a computer-readable medium for determining the behavior patterns of users of a telecommunication system based on information collected from the system. The computer readable-medium is encoded with a computer program, the computer program including program code for defining at least one variable or a combination of variables of the telecommunication system and program code for filtering the user-specific information corresponding to at least one variable or a combination of variables from the information received from the telecommunication system. The computer program also includes program code for classifying the users of the telecommunication system on the basis of the filtered user-specific information into various classes indicative of a user's behavior patterns during use of the telecommunication system.

Application No. 10/018,502

As outlined below, Applicants submit that the cited references of Knight and Elenbaas do not teach or suggest the elements of claims 1-25.

Knight discloses that in a cellular network, a base station analyses data associated with the calls made by users of that station in order to form usage profiles of users. The profiles are stored in a database, which is then used to calculate future usage. On the basis of those calculations, speculative connections are made available to specific users at times that are optimum from the station's perspective, in anticipation of demand. This is particularly applicable to data networks wherein users typically access data services (such as Internet pages) at the same time each day. A change analyzer may be included in order to determine the degree of change occurring in data pages and decide whether a whole page or just the modifications to the page should be sent to the subscriber. Call related data may include dialed call destination, time of call, location from which call is dialed out/received, access to Internet, access to information services. See at least the Abstract of Knight.

Elenbaas discloses a video retrieval system that allows a user to quickly and easily select and receive stories of interest from a video stream. The video retrieval system classifies stories and delivers samples of selected stories that match each user's current preference. The user's preferences may include particular broadcast networks, persons, story topics, keywords, and the like. Key frames of each selected story are sequentially displayed; when the user views a frame of interest, the user selects the story that is associated with the key frame for more detailed viewing. This is particularly well suited

Application No. 10/018,502

for targeted news retrieval. In a preferred embodiment, news stories are stored, and the selection of a news story for detailed viewing based on the associated key frames effects a playback of the selected news story. This also allows a user to effect a directed search of other types of broadcasts as well. For example, the user may initiate an automated scan that presents samples of broadcasts that conform to the user's current preferences, akin to directed channel-surfing. See at least the Abstract of Elenbaas.

Applicants submit that the combination of Knight and Elenbaas fail to teach or suggest the combination of features recited in claims 1-25. Each of claims 1-25 recites, in part, classifying users of the telecommunication system on the basis of the filtered user-specific information into various classes indicative of a user's behavior patterns during use of the telecommunication system. As noted in the Office Action, Knight does not teach or suggest this feature.

In the Response which was filed on April 20, 2007, Applicants argued that Elenbaas does not cure any of the deficiencies of Knight, as outlined above. Specifically, Applicants argued that Elenbaas does not teach or suggest classifying <u>users</u> of the telecommunication system on the basis of the filtered user-specific information into various classes <u>indicative of a user's behavior patterns</u> during use of the telecommunication system, as recited in the pending claims. Applicants argued that Elenbaas merely discloses that the <u>broadcast segments</u> are classified and that Elenbaas is only directed to an apparatus that sits in the home of a single user and serves the needs of that single user.

- 12 -

Therefore, Applicants submitted there is no teaching or suggestion in Elenbaas of classifying multiple users, as alleged in the Office Action.

In the Response to Arguments section, the Office Action indicated that Elenbaas teaches the classifying feature recited in the pending claims because paragraph 0040 of Elenbaas discloses that "the classifier 120 <u>classifies</u> these portions using the techniques presented above, the <u>filter</u> 160 identifies those portions that conform to the <u>user's</u> <u>preferences</u> 191 and the presenter 170 presents the set of key frames 171 from each of the <u>filtered</u> portions 161."

Paragraph 0040 of Elenbaas discloses that in an on-line mode, the story segment identifier 110 provides text segments 113, audio segments 112, and key frames 114 corresponding to the current non-commercial portions of the broadcast channel. The classifier 120 classifies these portions using the techniques presented above. The filter 160 identifies those portions that conform to the user's preferences 191, and the presenter 170 presents the set of key frames 171 from each of the filtered portions 161. When the user selects a particular set of key frames 171, the broadcast channel selector 105 is tuned to the channel corresponding to the selected key frames 171, and the story segment identifier 110, storage device 115 and player 180 are placed in a bypass mode to present the video stream 101 of the selected channel to the display 175.

Applicants submit that Elenbaas discloses that the <u>non-commercial portions of the</u> <u>broadcast channel are classified</u> and filtered based on the user's preferences. In the present invention, on the other hand, the <u>users</u> of the telecommunication system <u>are classified</u>

on the basis of the filtered user-specific information into various classes indicative of a user's behavior patterns during use of the telecommunication system, as recited in the pending claims. There is no teaching or suggestion in Elenbaas of classifying users into various classes indicative of a user's behavior patterns, as alleged in the Office Action.

In addition, in Elenbaas, all activities relating to the end user's interests or behaviour occur in the terminal equipment that is at the end user's disposal. Furthermore, Elenbaas does not teach or suggest collecting information about the user's behaviour. Instead, Elenbaas allows the user to manually configure his preferences to the equipment.

Furthermore, one of ordinary skill in the art would not have been motivated to combine the teachings of Knight and Elenbaas, as alleged in the Office Action. Elenbaas is directed to broadcasting networks, specifically television, while Knight is directed to cellular telephony. Thus, it is very unlikely that one skilled in the art seeking to improve the services of a cellular telephone network, as disclosed in Knight, would consider using solutions known from television broadcastings, as disclosed in Elenbaas.

Additionally, Knight and Elenbaas are both targeted to a single user at a time. For example, Knight monitors the call data of each user separately, in order to predict the future usage of service for each individual user. Knight then initiates actions to prepare, for example, data related to the service used by the individual user in advance, in order to allow a faster and more efficient provisioning of the service when it is used by the user the next time. Elenbaas selects available data of a service (for example, a news service) based on the profile defined separately for each single users, so that a single user only

- 14 -

receives the data that is of interest. The present invention, on the other hand, is directed to a telecommunication system level (not a single user level). In the present invention, the data of all users are collected, filtered and classified, in order to perform an analysis on the telecommunication system level and eventually regulate parameters of the whole telecommunication system. See for example page 8, lines 9-11 of the present application. As previously noted, in the cited prior art, data is collected and analyzed for each user separately and no regulations of parameters on system level are performed.

In addition, Knight does not disclose filtering user-specific information corresponding to the defined at least one variable or a combination of variables from the information collected from the telecommunication system, as recited in the pending claims. Instead Knight teaches the usage of the collected, user specific data, in order to make predications about the future behavior/usage of service for each single user. See at least page 4, line 31-page 5, line 24 of Knight. Because only the data for a single user is used by Knight to make the prediction of future service usage for the single user, filtering is not needed. The amount of data collected and processed with respect to an individual user is pretty small compared to the data collected in the present application, where data of all users connected to the telecommunication system is collected, and filtering is essential in order to reduce the amount of data to be classified and further analyzed. See page 6 lines 13-21 of the present application.

Based on the distinctions noted above, Applicants respectfully assert that the rejection under 35 U.S.C. §103(a) should be withdrawn because neither Knight nor

Application No. 10/018,502

Elenbaas, whether taken singly or combined, teaches or suggests each feature of claims 1, 13, 19 and 25 and hence, dependent claims 2-12, 14-18 and 20-24 thereon.

As noted previously, claims 1-25 recite subject matter which is neither disclosed nor suggested in the prior art references cited in the Office Action. It is therefore respectfully requested that all of claims 1-25 be allowed, and this application passed to issue.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, the applicants' undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

Application No. 10/018,502

In the event this paper is not being timely filed, the applicants respectfully petition for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,

Arlene P. Neal
Registration No. 43,828

Customer No. 32294
SQUIRE, SANDERS & DEMPSEY LLP
14TH Floor
8000 Towers Crescent Drive
Tysons Corner, Virginia 22182-2700
Telephone: 703-720-7800
Fax: 703-720-7802

APN:ksh

Application No. 10/018,502